

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Takashi Tsuji et al.                      Art Unit :  
Serial No. :    Examiner :  
Filed : July 22, 2003  
Title : HUMAN MONOCLONAL ANTIBODY AGAINST A COSTIMULATORY  
              SIGNAL TRANSDUCTION MOLECULE AILIM AND PHARMACEUTICAL  
              USE THEREOF

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Under 35 U.S.C. § 120, this application relies on the earlier filing date of U.S. Application Number 09/859,053, filed on May 16, 2001. The references listed on the enclosed form PTO-1449 were submitted to and/or cited by the Office in the prior application and, therefore, are not provided in this application.

Enclosed is a copy of a declaration of Dr. Katsunari Tezuka regarding posters that were displayed on November 18, 1993, and November 30, 1994, to attendees of conferences held in Japan. The enclosed declaration was submitted in an Information Disclosure Statement for U.S. Application Number 09/859,053.

Applicants also wish to bring to the Examiner's attention the following co-pending applications, which are assigned to the assignee of the present application and contain at least one overlapping inventor with the present application:

U.S. Application No. 09/383,551, filed August 26, 1999;  
U.S. Application No. 09/561,308, filed April 28, 2000;  
U.S. Application No. 10/107,828, filed March 26, 2002;  
U.S. Application No. 10/107,868, filed March 26, 2002;  
U.S. Application No. 10/107,907, filed March 26, 2002;  
U.S. Application No. 10/301,056, filed November 21, 2002;  
U.S. Application No. 09/830,548, filed June 12, 2001; and  
U.S. Application No. 09/859,053, filed on May 16, 2001.

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Page : 2 of 2

Attorney's Docket No.: 14539-006002 / JF-93US-D1

This statement is being filed with the application. Please apply any charges or credits to  
Deposit Account No. 06-1050, referencing Attorney Docket No. 14539-006002.

Respectfully submitted,

Date: \_\_\_\_\_

*July 22, 2003*

*Jack Brennan*

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Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. <b>14539-006002</b>	Application No.
	Applicant <b>Takashi Tsuji et al.</b>		
	Filing Date <b>July 22, 2003</b>	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,506,126	4/9/1996	Seed et al.			
	AB	5,521,288	5/28/1996	Linsley et al.			
	AC	6,075,181	6/13/2000	Kucherlapati et al.			
	AD	2002/0156242	10/24/2002	Tamatani et al.			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AE	WO 98/11909	03/26/1998	WIPO				
	AF	WO 98/38216	09/03/1998	WIPO				
	AG	WO 99/15553	04/01/1999	WIPO				
	AH	WO 00/19988	04/13/2000	WIPO				
	AI	WO 00/46240	08/10/2000	WIPO				
	AJ	WO 00/67788	11/16/2000	WIPO				
	AK	WO 01/08700	02/08/2001	WIPO				
	AL	WO 01/12658	02/22/2001	WIPO				
	AM	WO 01/15732	03/08/2001	WIPO				
	AN	WO 01/18022	03/15/2001	WIPO				
	AO	WO 01/21796	03/29/2001	WIPO				
	AP	WO 01/32675	05/10/2001	WIPO				
	AQ	WO 01/64704	09/07/2001	WIPO				
	AR	WO 01/87981	11/22/2001	WIPO				
	AS	WO 02/44364	06/06/2002	WIPO				
	AT	WO 02/70010	09/12/2002	WIPO				
	AU	WO 02/76504	10/03/2002	WIPO				
	AV	AU 13320/99	04/12/1999	AU				
	AW	DE 19821060	04/15/1999	DE				
	AX	EP 0984023 A1	03/08/2000	EP				

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							Yes	No
	AY	EP 1 125 585 A1	08/22/2001	EP				

Other Documents (include Author, Title, Date, and Place of Publication)		
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	AZ	Aicher et al., "Characterization of Human Inducible Costimulator Ligand Expression and Function," J. IMMUNOL., 164(9):4689-4696 (2000)
	AAA	Bajorath, "A molecular model of inducible costimulator protein and three-dimensional analysis of its relation to the CD28 family of T cell-specific costimulatory receptors," J. MOL. MODEL 5:169-176 (1999)
	ABB	Beier et al., "Induction, binding specificity and function of human ICOS," EUR. J. IMMUNOL., 30(12):3707-3717 (2000)
	ACC	Brodie et al., "LICOS, a primordial costimulatory ligand?," CURR. BIOL., 10(6):333-336 (2000)
	ADD	Buonfiglio et al., "Characterization of a novel human surface molecule selectively expressed by mature thymocytes, activated T cells and subsets of T cell lymphomas," EUR. J. IMMUNOL., 29(9):2863-2874 (1999)
	AEE	Buonfiglio et al., "The T cell activation molecule H4 and the CD28-like molecule ICOS are identical," EUR. J. IMMUNOL. 30(12):3463-3467 (2000)
	AFF	Cameron "Recent advances in transgenic technology" MOLECULAR BIOTECHNOLOGY 7:253-65 (1997)
	AGG	Chambers, "The expanding world of co-stimulation: the two-signal model revisited," TRENDS IN IMMUNOLOGY, 22(4):217-223 (2001)
	AHH	Cocks et al., "A novel receptor involved in T-cell activation," NATURE, 376:260-263 (1995)
	AII	Coyle et al., "The CD28-Related Molecule ICOS Is Required for Effective T Cell-Dependent Immune Responses," IMMUNITY 13(1):95-105 (2000)
	AJJ	Dong et al., "Cutting Edge: Critical Role of Inducible Costimulator in Germinal Center Reactions," J. IMMUNOL., 166(6):3659-3662 (2001)
	AKK	Dong, "ICOS co-stimulatory receptor is essential for T-cell activation and function," NATURE 409(6816):97-101 (2001)
	ALL	Gonzalo et al., "Cutting Edge: The Related Molecules CD28 and Inducible Costimulator Deliver Both Unique and Complementary Signals Required for Optimal T Cell Activation," J. IMMUNOL., 166(1):1-5 (2001)
	AMM	Guo et al., "Stimulatory Effects of B7-Related Protein-1 on Cellular and Humoral Immune Responses in Mice," J. IMMUNOL., 166(9):5578-5584 (2001)
	ANN	Hanzawa et al., "Characteristics of a TTH1 antibody which blocks an unknown adhesion phenomenon," PROCEEDINGS OF THE JAPANESE SOCIETY FOR IMMUNOLOGY, Vol. 24, Abstract No. W17-13 (1994) [ORIGINAL JAPANESE AND ENGLISH LANGUAGE TRANSLATION]
	AOO	Heyeck et al., "Developmental regulation of a murine T-cell-specific tyrosine kinase gene, Tsk," PROC. NATL. ACAD. SCI. USA, 90:669-673 (1993)

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	APP	Houdebine "Production of pharmaceutical proteins from transgenic animals" J. BIOTECHNOL. 34:269-87 (1994)
	AQQ	Hutloff et al., "ICOS is an inducible T-cell co-stimulator structurally and functionally related to CD28," NATURE, 397(6716):263-266 (1999)
	ARR	Ishikawa et al., "Prediction of the Coding Sequences of Unidentified Human Genes. X. The Complete Sequences of 100 New cDNA Clones from Brain Which Can Code for Large Proteins <i>in vitro</i> ," DNA RESEARCH, 5:169-176 (1998)
	ASS	Kappel et al. "Regulating gene expression in transgenic animals" CURRENT OPINION IN BIOTECHNOLOGY 3:548-53 (1992)
	ATT	Kopf et al., "Inducible Costimulator Protein (ICOS) Controls T Helper Cell Subset Polarization after Virus and Parasite Infection," J. EXP. MED., 192(1):53-61 (2000)
	AUU	Kuchroo et al., "B7-1 and B7-2 costimulatory molecules activate differentially the Th1/Th2 developmental pathways: Application to autoimmune disease therapy," CELL, 80:707-718 (1995)
	AVV	Ling et al., "Cutting Edge: Identification of GL50, a Novel B7-Like Protein That Functionally Binds to ICOS Receptor," J. IMMUNOL., 164(4):1653-1657 (2000)
	AWW	Mages et al., "Molecular cloning and characterization of murine ICOS and identification of B7h as ICOS ligand," EUR. J. IMMUNOL., 30(4):1040-1047 (2000)
	AXX	Marguet et al., "cDNA Cloning for Mouse Thymocyte-activating Molecule," THE JOURNAL OF BIOLOGICAL CHEMISTRY, 267(4):2200-2208 (1992)
	AYY	McAdam et al. (2000) "Mouse inducible costimulatory (ICOS) molecule expression is increased by CD28 costimulation and regulates development of Th2 cells," FASEB JOURNAL, 14(6):A1169
	AZZ	McAdam, "ICOS is critical for CD40-mediated antibody class switching," NATURE 409(6816):102-105 (2001)
	AAAA	McAdam, "Mouse Inducible Costimulatory Molecule (ICOS) Expression Is Enhanced by CD28 Costimulation and Regulates Differentiation of CD4 <sup>+</sup> T Cells," J. IMMUNOL., 165(9):5035-5040 (2000)
	ABBB	Mueller, "T cells: A proliferation of costimulatory molecules," CURR. BIOL. 10(6):R227-R230 (2000)
	ACCC	Mullins et al. "Expression of the DBA/2J Ren-2 gene in the adrenal gland of transgenic mice" EMBO J., 8:4065-72 (1989)
	ADDD	Mullins et al. "Fulminant hypertension in transgenic rats harbouring the mouse Ren-2 gene" NATURE, 344:541-44 (1990)
	AEEE	Mullins et al. "Transgenesis in nonmurine species" Hypertension 22:630-33 (1993)
	AFFF	Niemann "Transgenic farm animals get off the ground" TRANSGENIC RESEARCH, 7:73-75 (1998)
	AGGG	Nojima et al., "The 4F9 antigen is a member of the tetra spans transmembrane protein family and functions as an accessory molecule in T cell activation and adhesion," CELLULAR IMMUNOLOGY, 152:249-260 (1993)
	AHHH	Overbeek "Factors affecting transgenic animal production," Transgenic Animal Technology, A Laboratory Handbook 96-98 (1994)
	AIII	Özkaynak et al., "Importance of ICOS-B7RP-1 costimulation in acute and chronic allograft rejection," NATURE IMMUNOLOGY 2(7):591-596 (2001)

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	AJJJ	Poster, Kyoto International Conference Hall, Takaragaike Sakyo-ku, Kyoto, JAPAN (November 30, 1994) [ORIGINAL JAPANESE AND ENGLISH LANGUAGE TRANSLATION]
	AKKK	Redoglia et al., "Characterization of H4: a mouse T lymphocyte activation molecule functionally associated with the CD3/T cell receptor," EUR. J. IMMUNOL., 26(11):2781-2789 (1996)
	ALLL	Riley et al., "ICOS Costimulation Requires IL-2 and Can Be Presented by CTLA-4 Engagement," J. IMMUNOL., 166(8):4943-4948 (2001)
	AMMM	Robert et al., "Antibody Cross-Linking of the Thymocyte-Specific Cell Surface Molecule CTX Causes Abnormal Mitosis and Multinucleation of Tumor Cells," EXPERIMENTAL CELL RESEARCH, 235:227-237 (1997)
	ANNN	Sato et al. (2000) "Up-regulation of inducible co-stimulator (ICOS) expression and its regulation of cytokine production in inflammatory bowel disease," Gastroenterology, 118(4):A662
	AOOO	Sharpe, "Analysis of lymphocyte costimulation <i>in vivo</i> using transgenic and 'knockout' mice," CURRENT OPINION IN IMMUNOLOGY, 7:389-395 (1995)
	APPP	Sigmund "Are studies in genetically altered mice out of control?" ARTERIOSCLER. THROMB. VASC. BIOL., 20:1425-29 (2000)
	AQQQ	Swallow et al., "B7h, a Novel Costimulatory Homolog of B7.1 and B7.2, Is Induced by TNF $\alpha$ ," IMMUNITY, 11(4):423-432 (1999)
	ARRR	Tafuri et al., "ICOS is essential for effective T-helper-cell responses," NATURE 409(6816):105-109 (2001)
	ASSS	Tai et al., "A role for CD9 molecules in T cell activation," J. EXP. MED., 184:753-758 (1996)
	ATTT	Tamatani et al., "AILIM/ICOS: a novel lymphocyte adhesion molecule," INTERNATIONAL IMMUNOLOGY, 12(1):51-55 (2000)
	AUUU	Tamatani et al., "Characteristics of an antibody which induces an ICAM-1-LFA-1-independent adhesion pathway," PROCEEDINGS OF THE JAPANESE SOCIETY FOR IMMUNOLOGY, Vol. 23, Abstract No. H-160 (1993) [ORIGINAL JAPANESE AND ENGLISH LANGUAGE TRANSLATION]
	AVVV	Tezuka et al., "Genetic cloning of a lymphocyte surface signal transduction molecule which induces an unknown adhesion phenomenon," PROCEEDINGS OF THE JAPANESE SOCIETY FOR IMMUNOLOGY, Vol. 24, Abstract No. W17-14 (1994) [ORIGINAL JAPANESE AND ENGLISH LANGUAGE TRANSLATION]
	AWWW	Tezuka et al., "Identification and Characterization of Rat AILIM/ICOS, a Novel T-Cell Costimulatory Molecule, Related to the CD28/CTLA4 Family," BIOCHEM. BIOPHYS. RES. COMMUN., 276(1):335-345 (2000)
	AXXX	Wall "Transgenic livestock: progress and prospects for the future" THERIOGENOLOGY 45:57-68 (1996)
	AYYY	Wang et al., "Costimulation of T cells by B7-H2, a B7-like molecule that binds ICOS," BLOOD, 96(8):2808-2813 (2000)
	AZZZ	Yoshinaga et al., "Characterization of a new human B7-related protein: B7RP-1 is the ligand to the co-stimulatory protein ICOS," INTERNATIONAL IMMUNOLOGY, 12(10):1439-1447 (2000)
	AAAAA	Yoshinaga et al., "T-cell co-stimulation through B7RP-1 and ICOS," NATURE, 402(6763):827-832 (1999)

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